

Fig.1A PRIOR ART

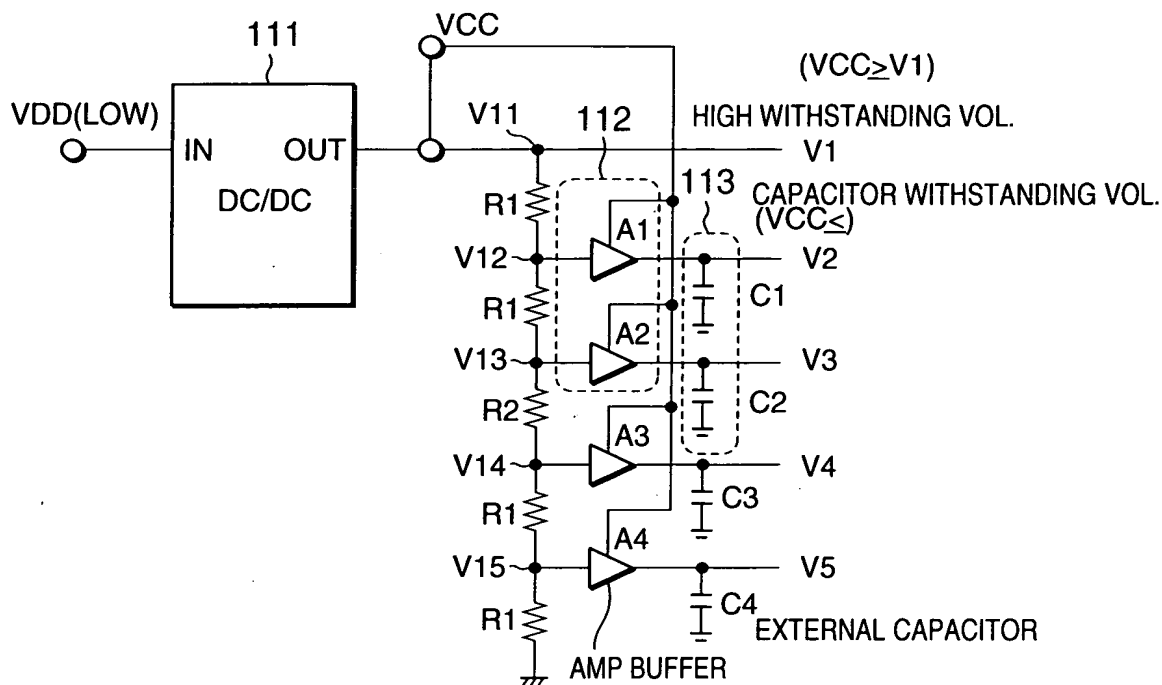
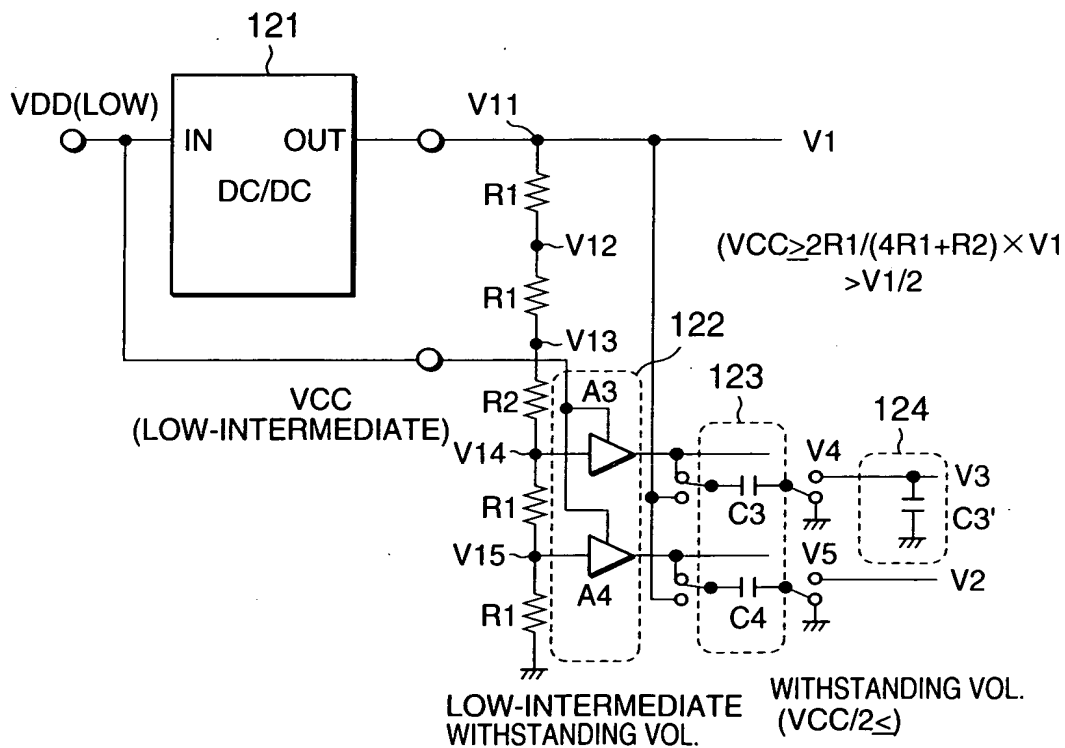


Fig.1B



The diagram illustrates a 4-bit parallel-to-serial converter circuit for an LCD. The input signal VLCD is connected to a series of resistors R1 and inverters A1 through A4. The output of the first inverter A1 is V1, which is connected to the input of the 2-to-1 multiplexer 221. The output of the second inverter A2 is V2, which is connected to the input of the 4-to-1 multiplexer 222. The output of the third inverter A3 is V3, which is connected to the input of the 2-to-1 multiplexer 221. The output of the fourth inverter A4 is V4, which is connected to the input of the 4-to-1 multiplexer 222. The output of the 2-to-1 multiplexer 221 is the COM OUTPUT (COM ELECTRODE). The output of the 4-to-1 multiplexer 222 is the SEG OUTPUT (SEG ELECTRODE). Both multiplexers are controlled by a FRAME SIGNAL (SCAN SIGNAL) and a DISPLAY DATA SIGNAL. The LCD level is noted as a capacitive load.

Fig.3 PRIOR ART

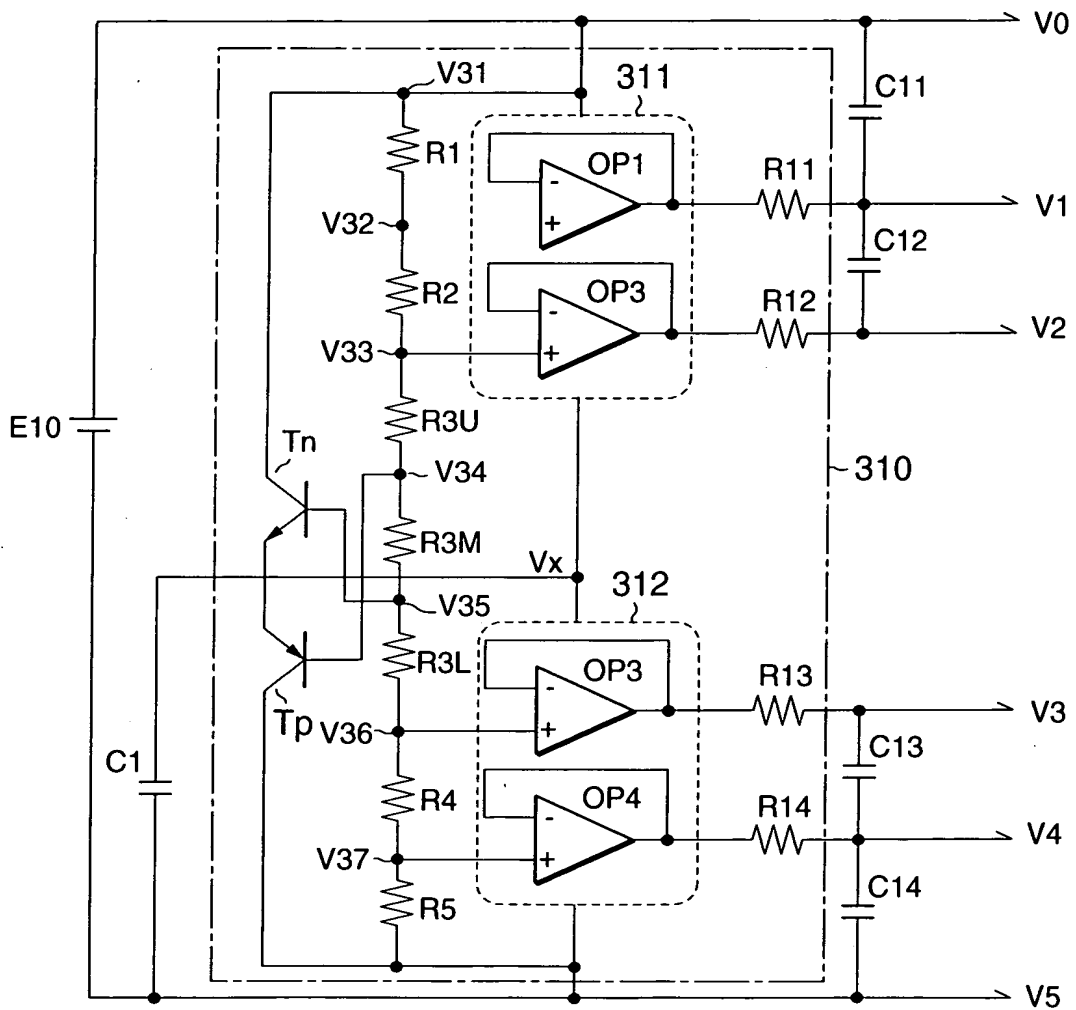


Fig.4 PRIOR ART

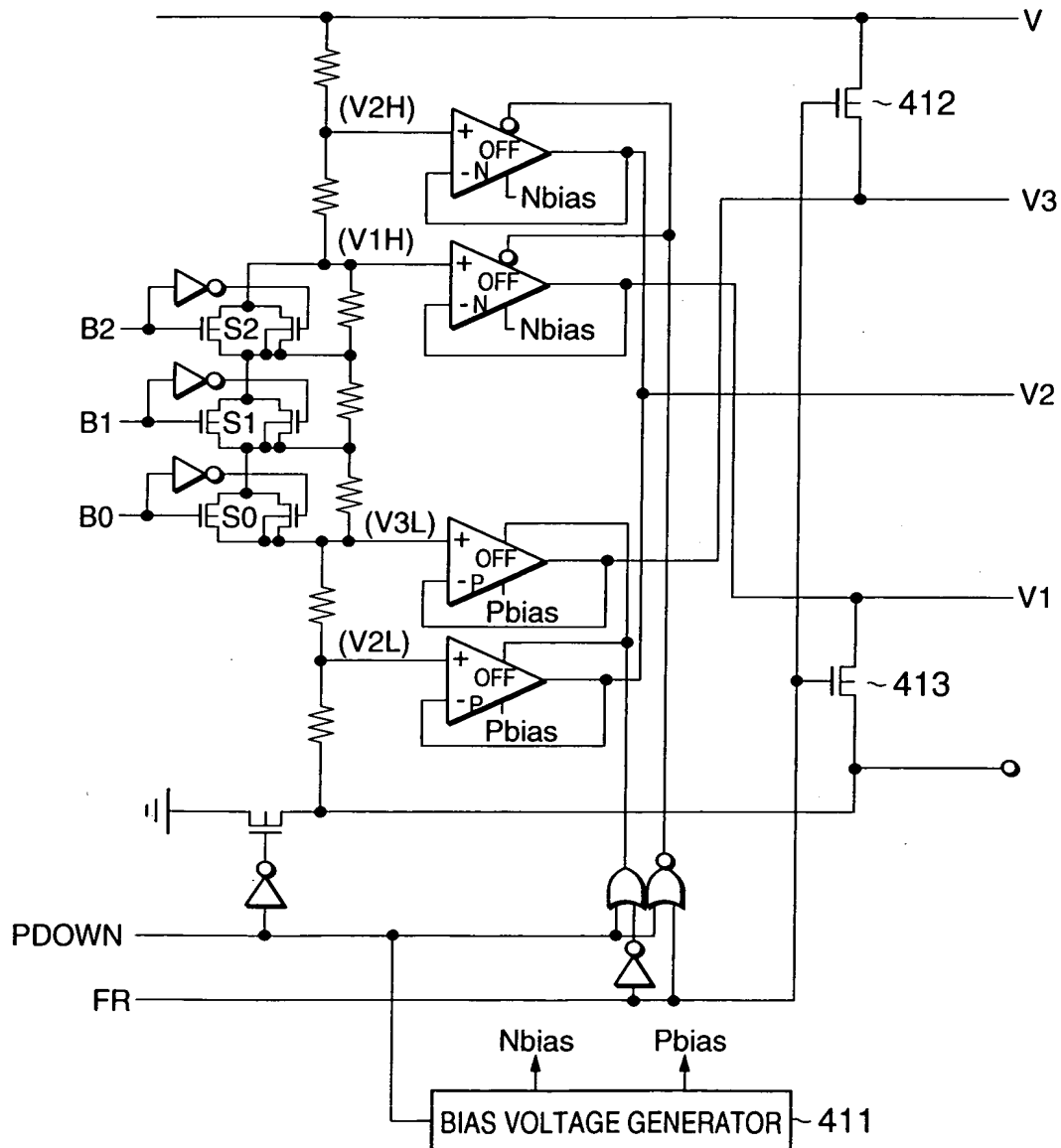


Fig.5

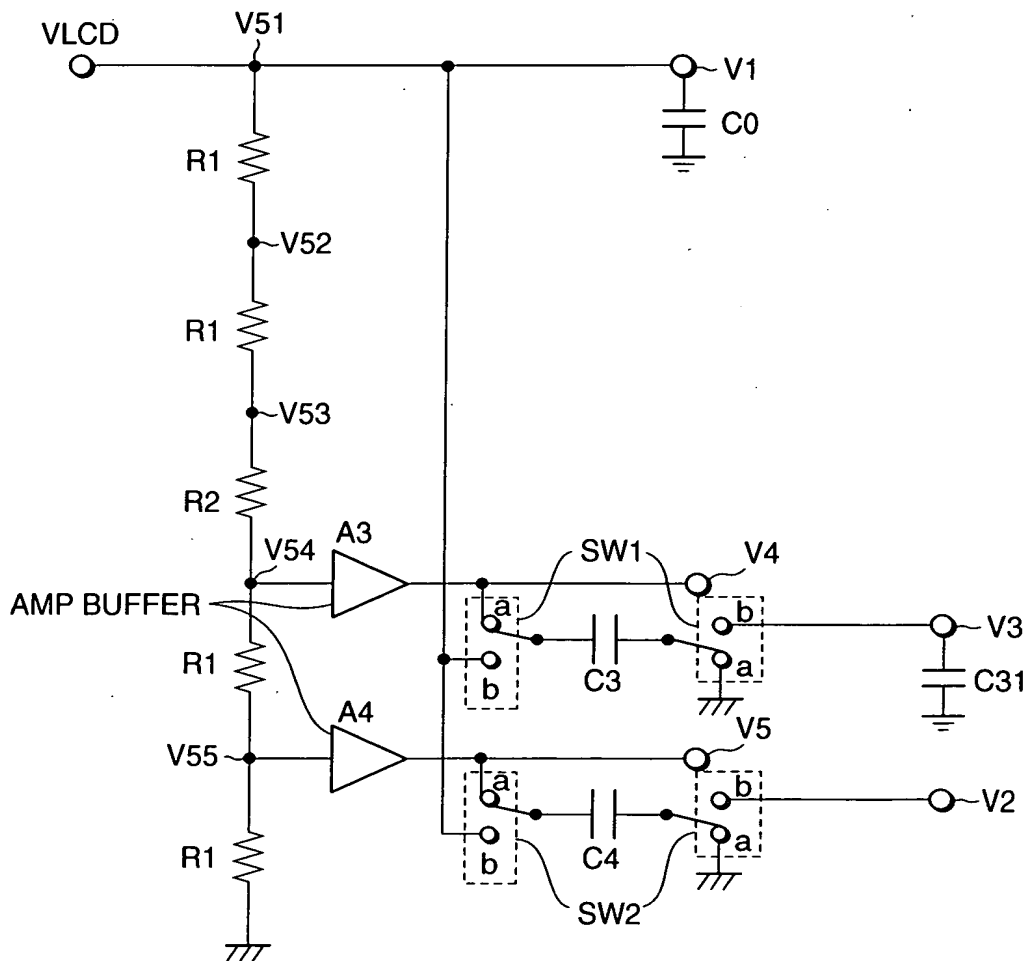


Fig.6

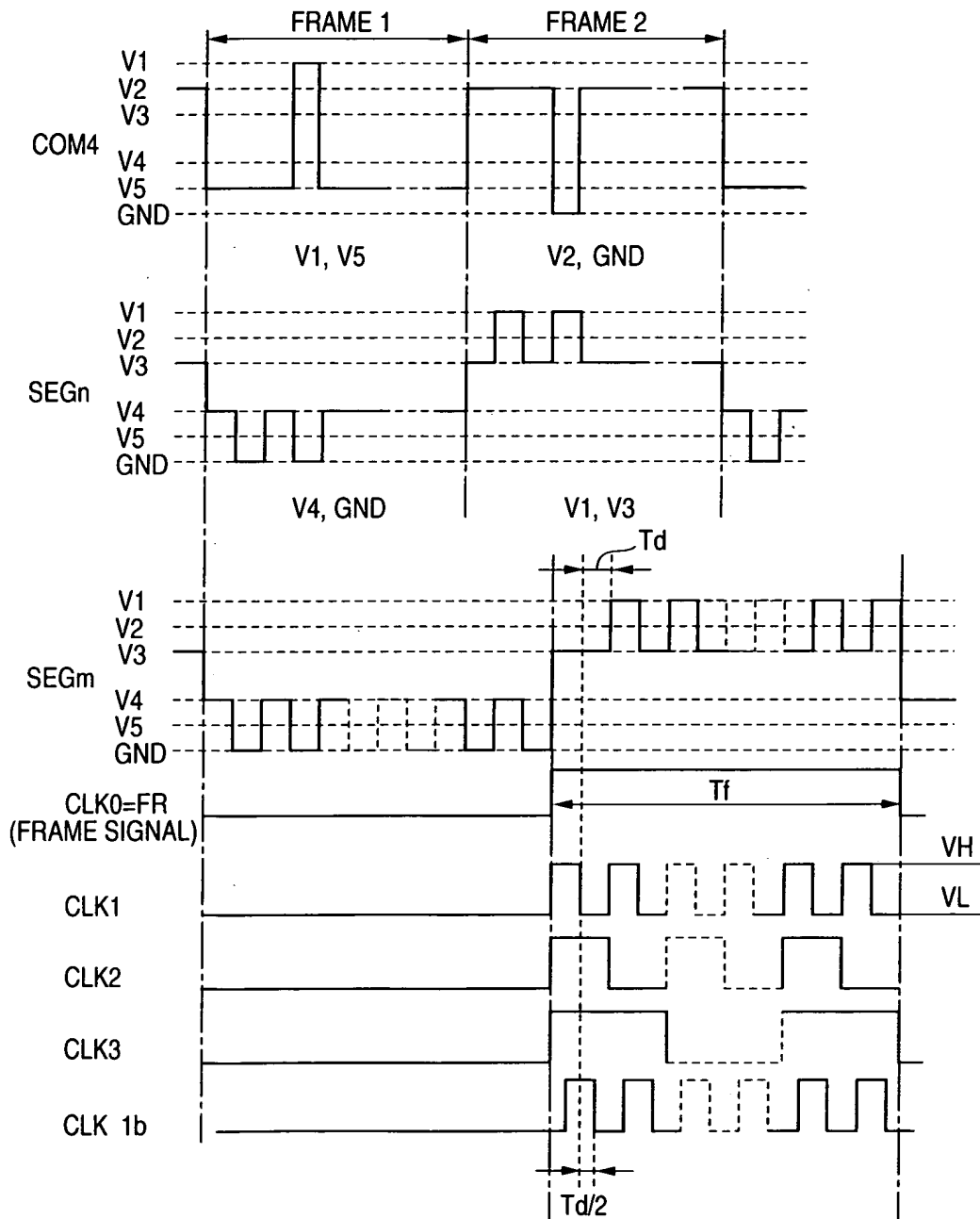


Fig.7

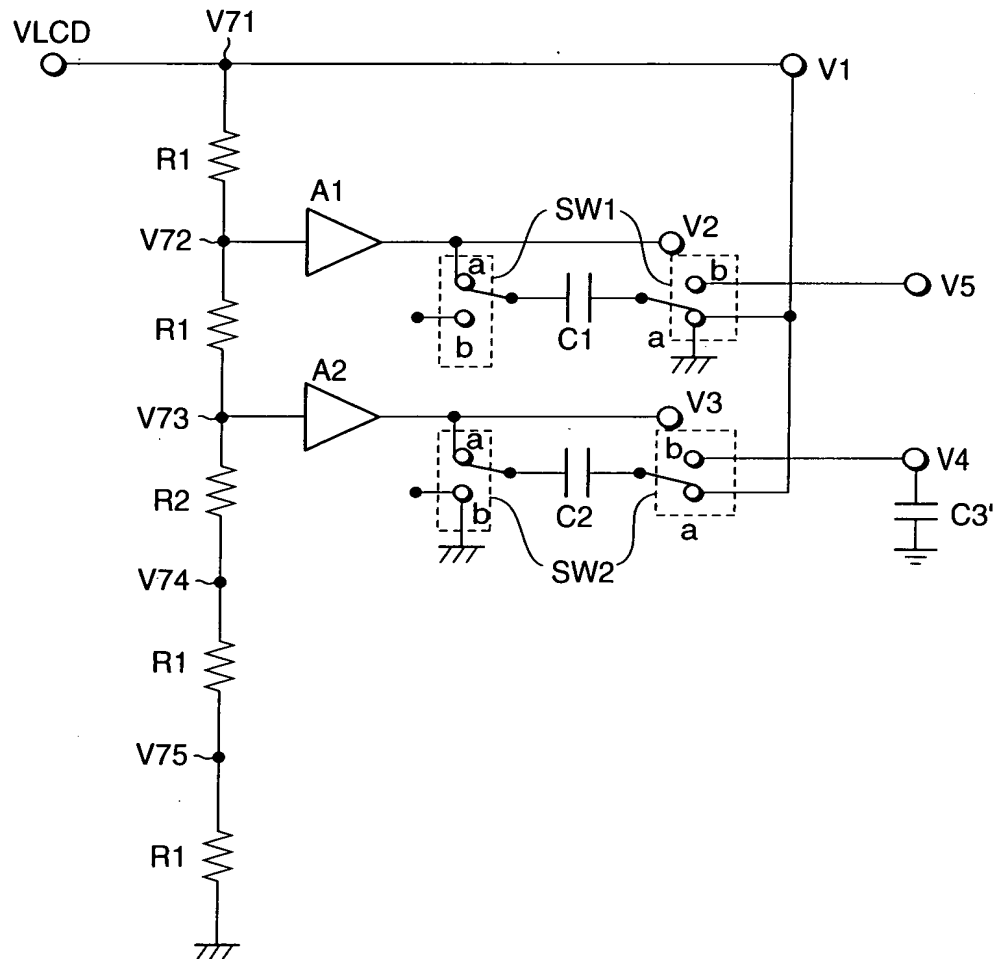


Fig.8

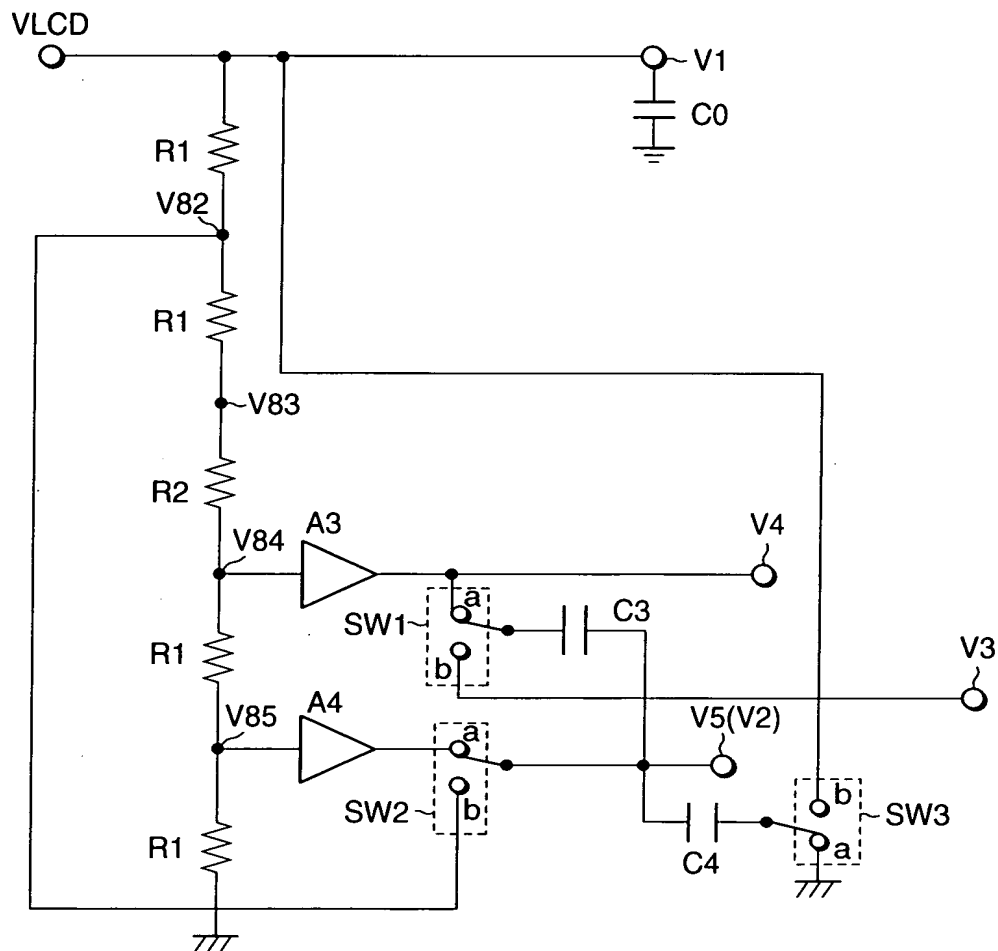




Fig.9

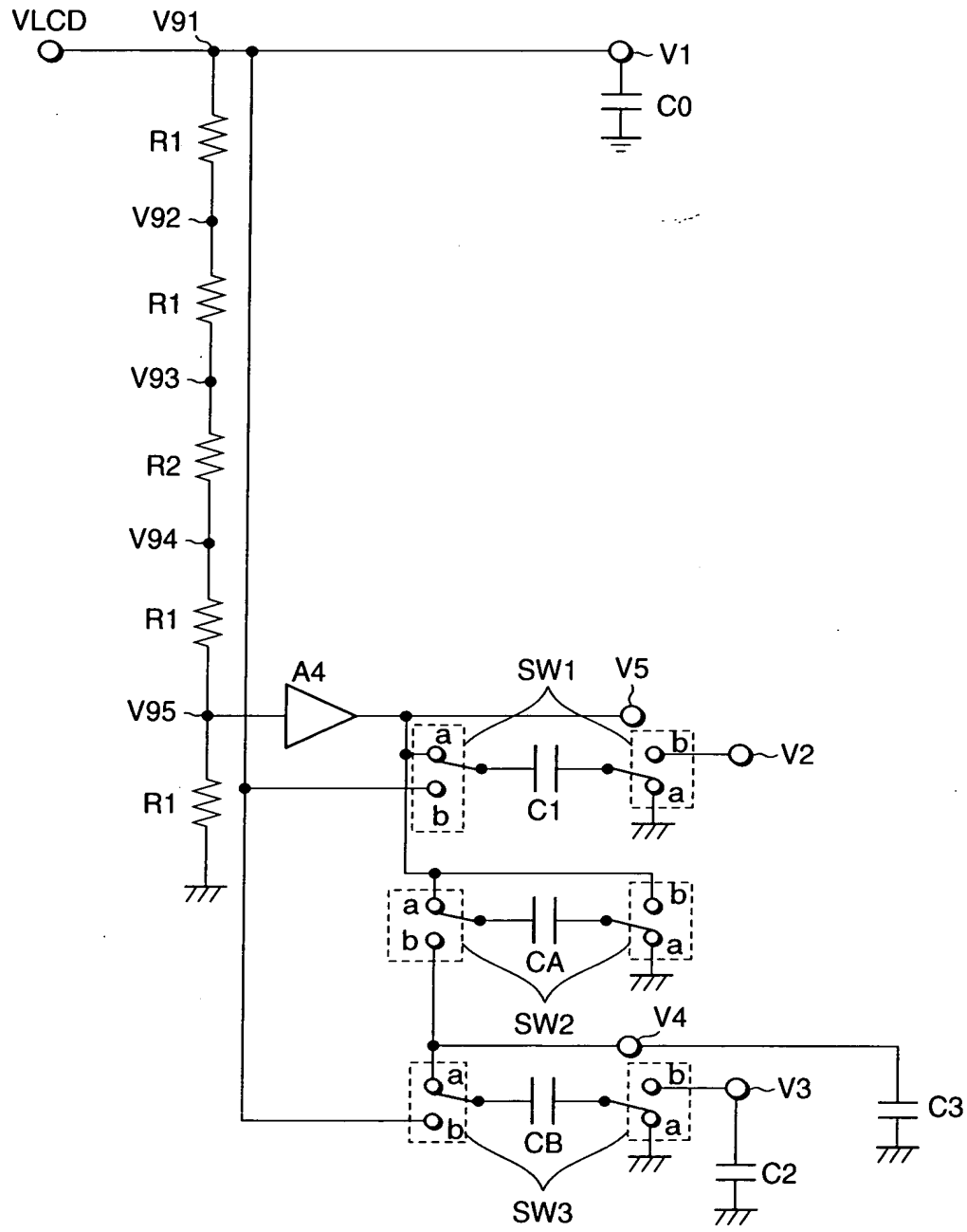


Fig.10

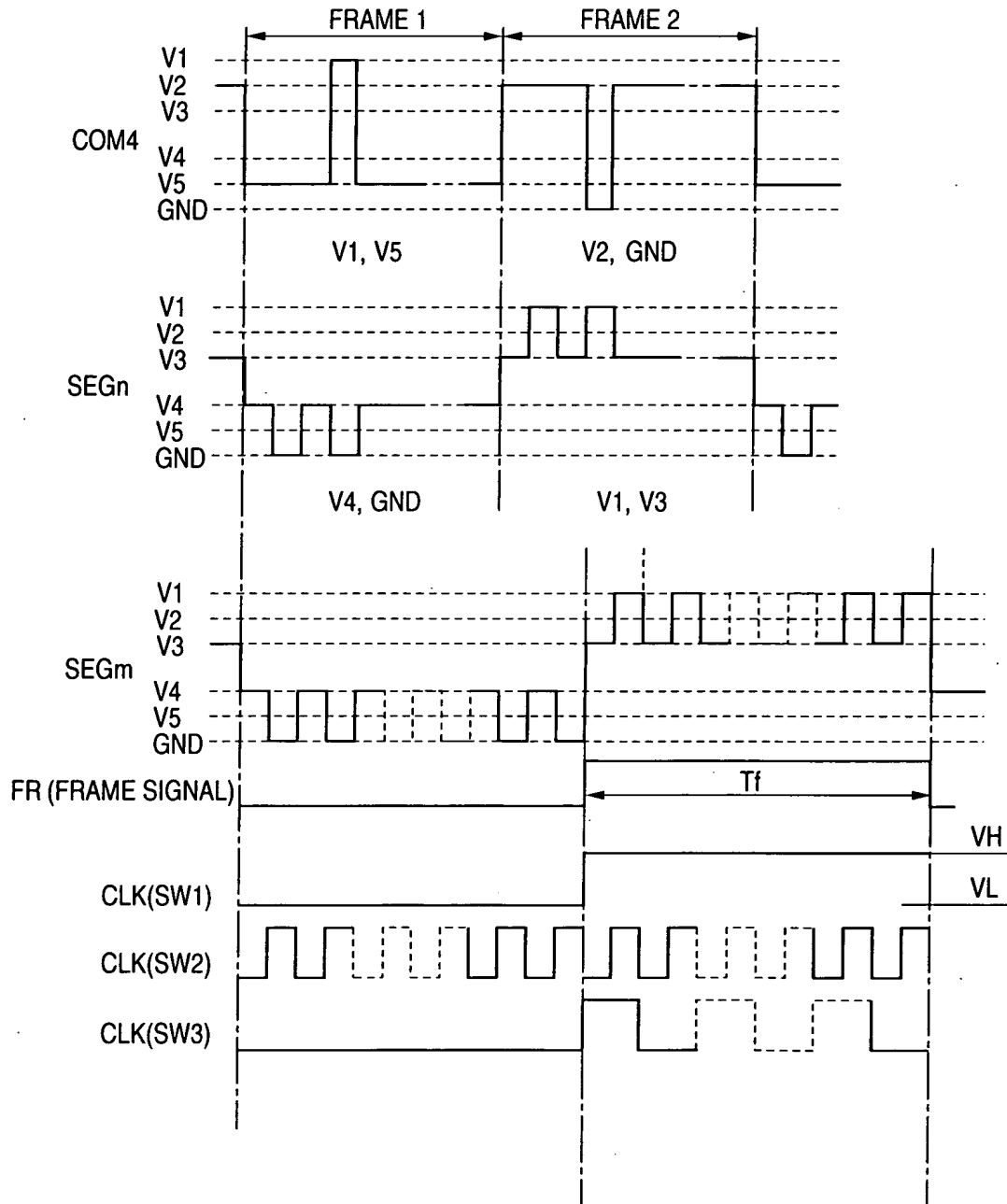
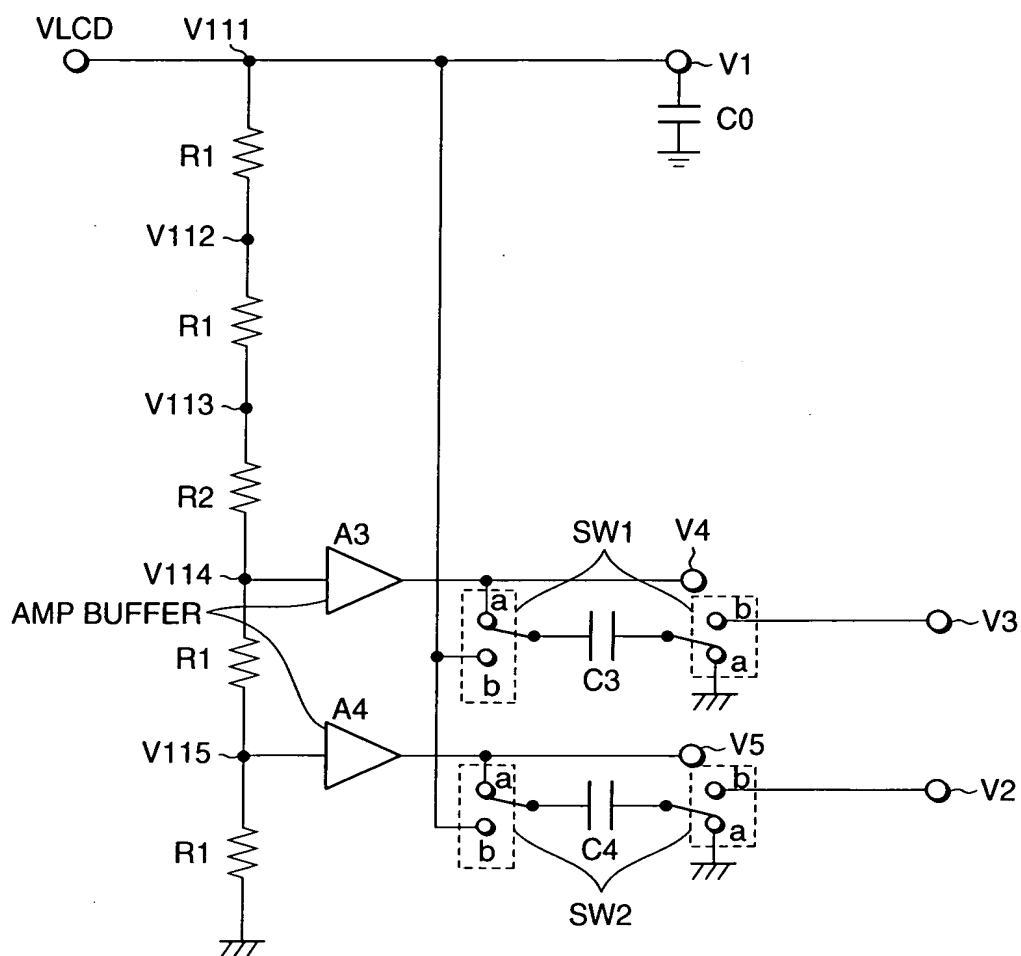


Fig.11



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Fig.12

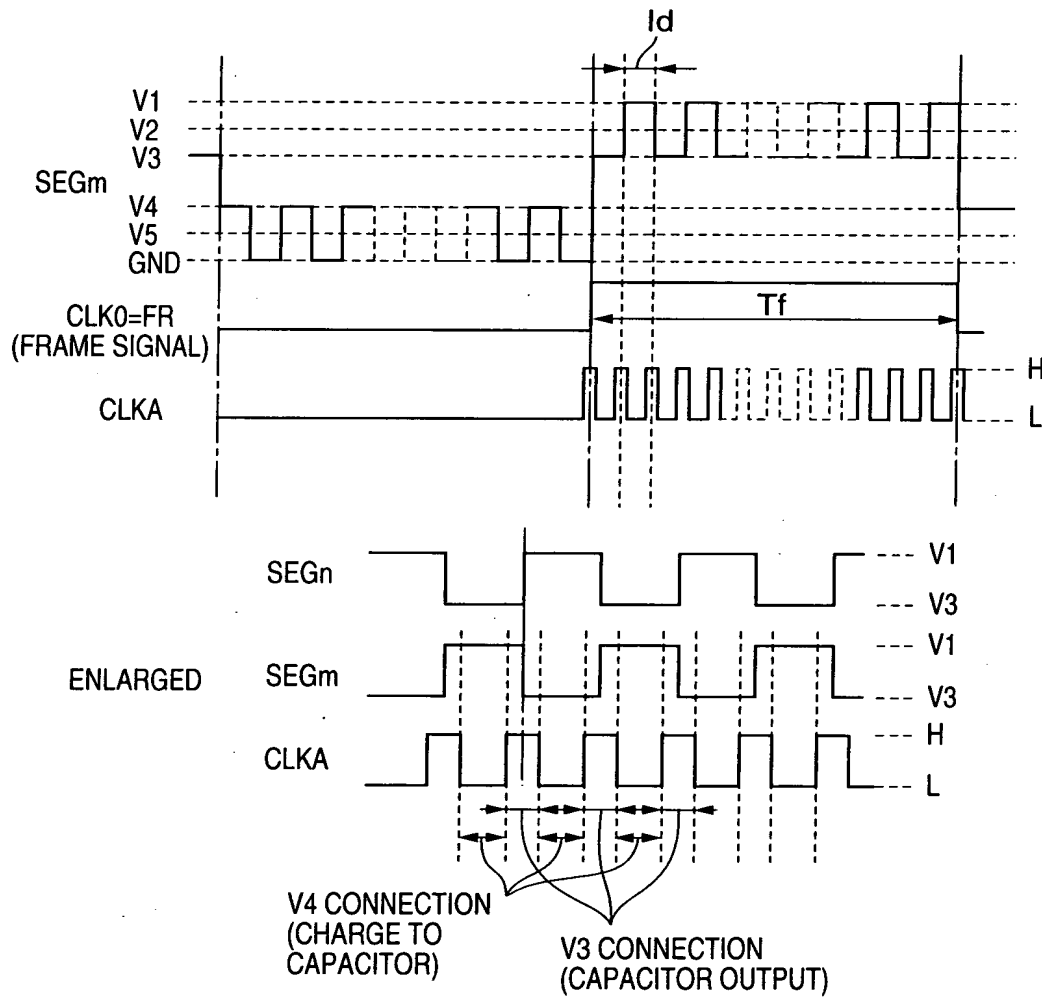


Fig.13

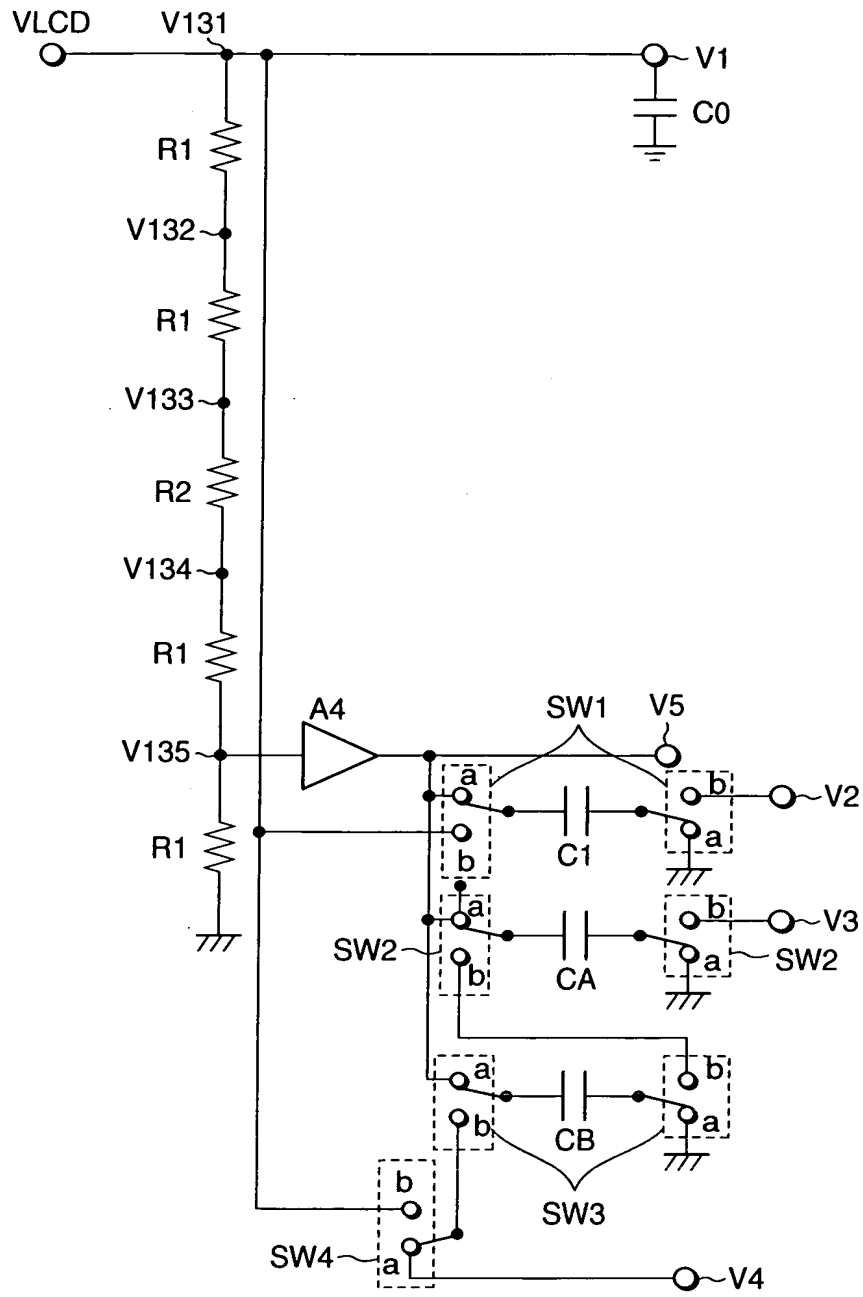


Fig.14

